

Chyron.

Chyron®
PRIME VSAR

**Unreal Virtual Set and
Augmented Reality Suite**

 **SINCE
DAY
ONE.**



Stunning and Simple Virtual Productions for Everyday ROI

PRIME VSAR merges the cutting-edge graphics of Epic Games' Unreal Engine 5 with the built-for-broadcast design, editorial, and live production capabilities of the PRIME Live Platform. Throughout every step of the virtual production process, PRIME VSAR demystifies and deskills working with the Unreal Engine to maximize ROI opportunities.

Live storytelling happens fast, and PRIME VSAR's built-in design toolkit enables the rapid creation of must-have broadcast graphics and studio elements, particularly for data-driven news storytelling. As your design team creates graphic objects and virtual studios setups, these assets smoothly translate into customizable and reskinable templates that any journalist or producer can leverage within a MOS-connected NRCS.

When it's time to go to air, PRIME VSAR's internal suite of virtual production tools - including chroma keyer, camera tracking, and playout/scene control interfaces - provide everything you need to create a captivating final output.

With PRIME VSAR, the stunning virtual worlds and graphics of the Unreal Engine can become a cornerstone of the show-stealing content you deliver to your audience.

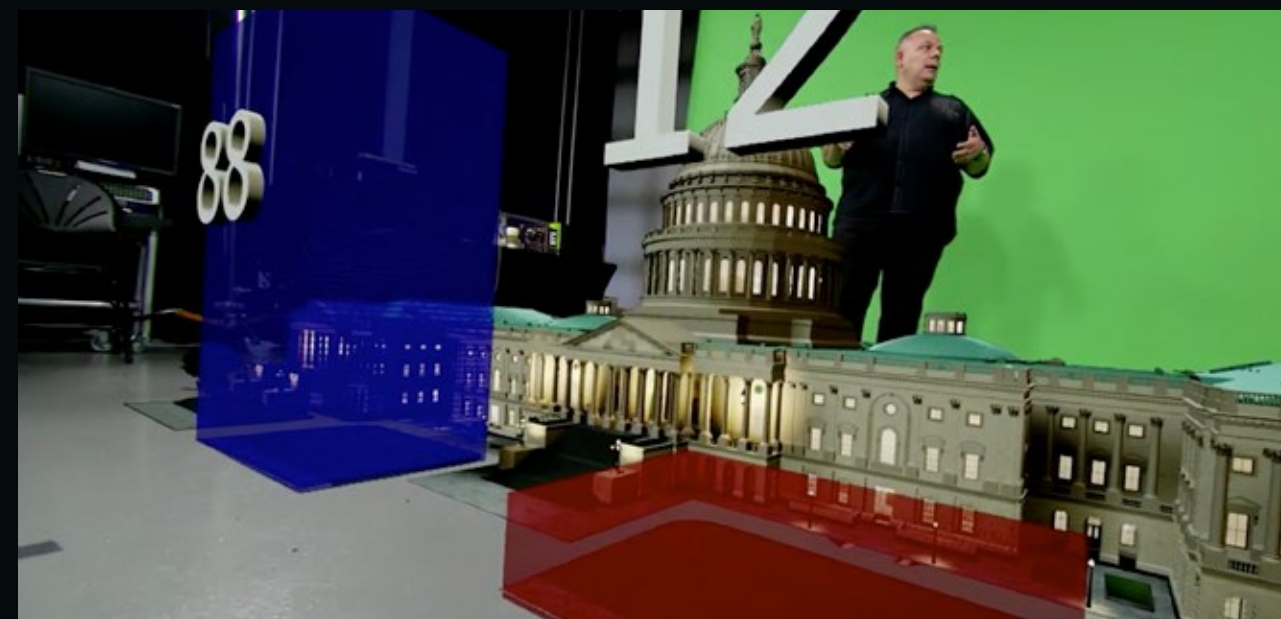
UNREAL GRAPHICS FOR YOUR VSAR USE CASE

Take advantage of the Unreal Engine in the way that suits you best. PRIME VSAR is a single solution for the full spectrum of virtual studio and augmented reality applications - and is fully adaptable to the unique requirements of your content creation needs.



END-TO-END VIRTUAL SETS

Host your show in a virtual studio or scene space that tops anything viewers have seen in the real world - with a fraction of the real estate. A green screen set is a huge cost-saver and places no limits on what you can dream up in the virtual space.



IN-STUDIO AUGMENTED REALITY

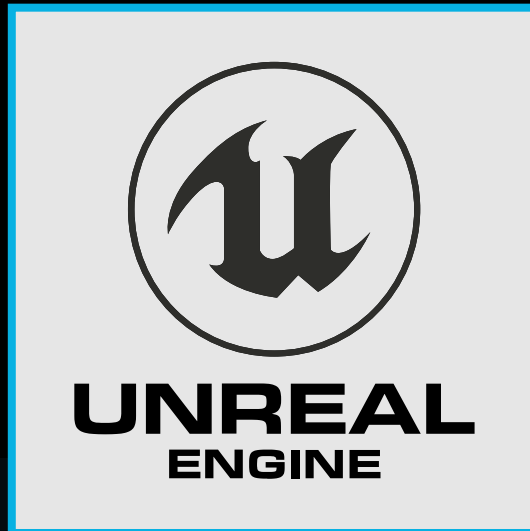
A great way to introduce new, exciting storytelling elements to your viewers, augmented reality can revitalize what you can do with your existing set - without a physical upgrade. Enrich sports, elections, news, or weather programs with hyper-realistic models and data-driven graphics that reflect and cast shadows on the set itself.



VIRTUAL WINDOW & SET EXTENSIONS

Bring new life to your video wall displays with lifelike Unreal graphics that bring a greater sense of depth to both virtual and physical sets. PRIME VSAR will manage positional and tracking data to make your video wall scenes follow in lockstep with your camera movements.

KEY FEATURES



UNREAL ENGINE 5.3

With Unreal's photorealistic rendering and film-quality VFX, creativity is limitless. Designers can realize immersive virtual studios, fantastical scenes, and true-to-life animated models to stun and captivate viewers. Support for Unreal 5.3 brings more tools for character animation, natural worlds, and higher-quality media outputs.



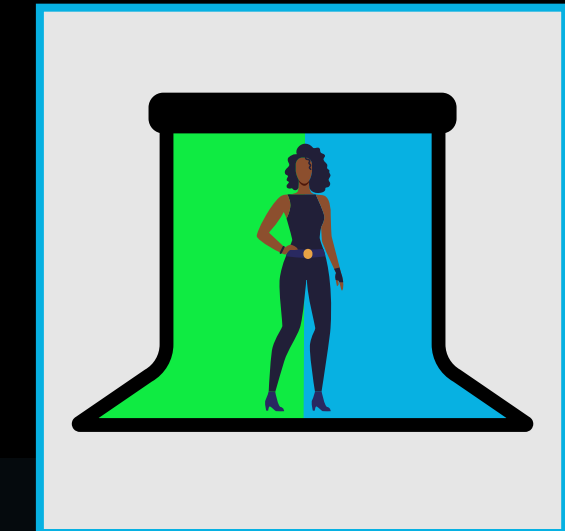
SIMPLE DESIGN TOOLKIT

Streamline the creation of essential day-to-day graphics, to focus on doing amazing things with the Unreal Engine. PRIME VSAR includes a native primitives library with 3D text and basic shapes, graphic and virtual screen templates, and out-of-the-box data integration for dynamic graphics driven by any source.



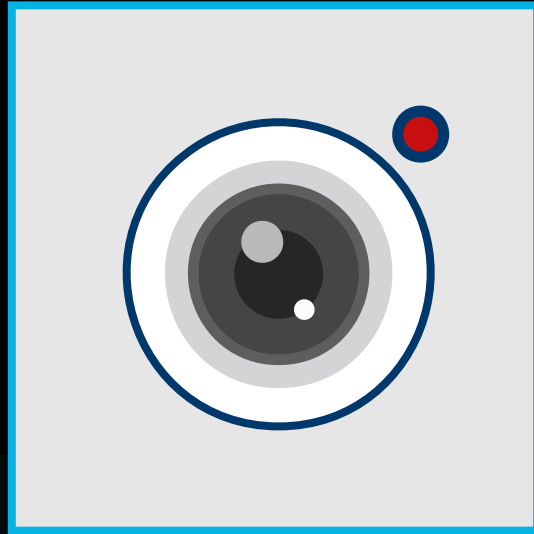
VSAR IN YOUR NRCS

Newsroom Computer System (NRCS) integration via CAMIO MOS connectivity puts creativity in the hands of producers and journalists. Browse scenes, select media, reskin studios, edit text and data, render a previews, and push out real-time updates - all within an NRCS interface. This MOS-based workflow is well-suited to modern hub-and-spoke network models.



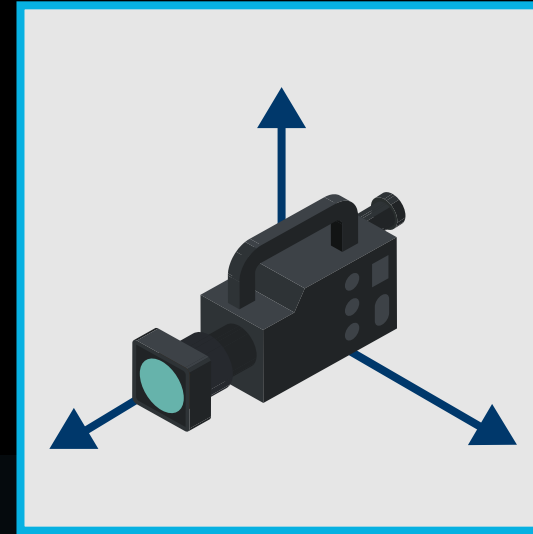
INTERNAL CHROMA KEYER

Seamlessly blend your live talent into the virtual space with PRIME VSAR's internal Unreal chroma keyer. Functioning as any other scene asset, it's incredibly easy-to-use, and with multi-pass technology and real-time compositing - the output looks fantastic.



CAMERA TRACKING

A built-in camera tracking processor supports the spectrum of camera tracking devices, including Mo-Sys, Vinten, Ross Video, Shotoku, Stype, and many more. This tracking data translates into fluid virtual sets and AR experiences, as well as a perspective-accurate parallax effect on video wall extensions.



TRACKLESS PRODUCTIONS

Craft multi-camera virtual productions with a single real-life camera. In trackless applications, you can position, and dictate movement of virtual camera shots within your scene. For live playout, all camera presets are available for recall in the Mercury Panel - that's visual, easy-to-read, and accessible via web browser.



CUSTOM SCENE CONTROL

Simplify control of media-rich virtual studios and complex graphic models with interfaces tailored to the job. The included Chyron Panels technology allows for custom-programming of scene management interfaces that virtually any member of your team can understand and operate.



ROBUST RENDERING ENGINE

Tap Unreal horsepower with less. PRIME VSAR supports two cameras on a single-engine - offering SDI connectivity HD & 4K-UHD format support and HDR video. Plus, you can dedicate an engine to generating real-time SDI previews of every scene - for absolute confidence monitoring.

TECHNICAL SPECIFICATIONS

GENERAL

Video Inputs	<ul style="list-style-type: none">• Up to 4 HD inputs via 3G-SDI• Up to 1 UHD input via 3G-SDI Quad-Link• Up to 1 UHD input via 12G-SDI
Video Outputs	<ul style="list-style-type: none">• Up to 4 HD outputs via 3G-SDI• Up to 2 UHD outputs via 3G-SDI Quad Link• Up to 2 UHD outputs via 12G-SDI
HDR Support	PQ, HLG, S-Log3
Video Standards	HD: 720p (23/24/50/59.94/60), 1080i (50/59.94/60), 1080p (23/24/25/29.97/30/50/59.94/60) UHD: 2160p (23/24/25/29.97/30/50/59.94/60)
Genlock	Analog black burst or analog tri-level reference via SDI signal on an input

GRAPHICS & DESIGN

Unreal Engine Edition	Unreal Engine 5.3.2
PRIME VSAR Designer Tools	<ul style="list-style-type: none">• Procedural primitives library - with 3D text, cones, arrows, torus, spheres, etc. - for dynamic chart graphics with animated transitions• Weather forecasting template that visualizes temperature and 3D model of weather conditions from connected data source• Virtual screen template with A/B switch functionality for playlist media playout
Graphics Data Integration	Out-of-the box data integration with common data files (CSV, XML, TXT)
Augmented Reality Features	Simplified tools for creating planar reflections, shadows, and foreground object masking for AR graphics
Chroma Keyer	Internal Unreal Engine chroma keyer with Composure plugin provides multi-pass chroma key for real-time compositing
Parallax Effect / Virtual Window	Utilizes camera tracking data for tracked virtual scenes within video wall displays

TRACKING & CONTROL

Camera Tracking	Built-in Cesium tracking processor application supports Mo-Sys, Vinten, Ross Video, Shotoku, Stype, and Ncam protocols, in addition to standard Free-D protocol
Trackless Virtual Cameras	Position and dictate movement for storable virtual camera recalls, with lens control within the virtual scene
Trackless Production Control	Included Mercury Panel provides a visual shotbox interface for virtual camera presets and recalls
Custom Scene Control Interfaces	Included VSAR Live Assist Panels technology allows for custom-programming of tailored control interfaces for managing virtual studios and graphics
Browser-Based Panel Access	Both Mercury and VSAR Live Assist Panels are HTML5-based, allowing for access from any browser

TRACKING & CONTROL

NRCS Integration	MOS connection to AP ENPS, Avid iNEWS, AVID Media Central, CGI Open Media, Dalet Galaxy, Octopus, Ross Video Inception, SNEWS Arion, and 7Mountains Dina, and other industry-standard NRCS via CAMIO integration
NRCS Control of PRIME VSAR	Within the NRCS, users can utilize the HTML-5 compatible CAMIO interface to access and control PRIME VSAR: <ul style="list-style-type: none">• Visual VSAR asset library• Add graphics + scenes to rundown and playlist sequencing• Make changes to editable fields and reskin VSAR graphics• Generate previews of changes before inserting into rundown• Push real-time scene updates to playout from the NRCS
Multi-Engine Control	A single CAMIO hub can control playout across multiple PRIME VSAR engines via MOS protocols

PRIME 3RU ENGINE HARDWARE

OS	Microsoft Windows 11 IoT Enterprise LTSC
CPU	Intel Xeon w5-3435X (16 Cores 32 Threads 3.10GHz)
GPU	NVIDIA RTX A6000
RAM	2 x 32GB DDR5
OS Storage	2 x 480GB SATA (RAID 1)
Media Storage	3 x 3.2TB (RAID 5)
RAID Controller	Broadcom
Ethernet Ports	1 x 1 GbE 1 x 10 GbE
Serial Connections	1 x DB9 RS232 Serial Port
GPI/O	Optional 16 I/O (8 IN 8 OUT)
System Dimensions	3RU Chassis: <ul style="list-style-type: none">• Height: 5.2" (132 mm)• Width: 17.2" (437 mm)• Depth: 25.5" (647 mm)• Gross Weight: 75 lbs (34.02 kg)
Front Panel	Chyron front panel with front-accessible drive bays for enhanced usability and maintenance, along with an LED display for system status and product serial information.
Power Requirements	AC Input / 100-240V, 60-50Hz, 9 Amp Max / 3.2 Amps @ 120 AC Typical Total Output Power and Input: <ul style="list-style-type: none">• 800W with Input 100 - 127 VAC• 1000W with Input 100 - 240 VAC• 1000W with Input 200 - 240 VAC

OUR SERVICES

Chyron is known for its end-to-end customer service. We partner with our customers from the initial project design, to project management, training, on-air launch support and postlaunch follow-up.

PROJECT MANAGEMENT AND COMMISSIONING

Project Management and Commissioning are part of the turn-key services that we offer. This ensures your investment is properly installed from Day One by a certified Chyron representative.

EXTENDED WARRANTIES

Finally, all Chyron products come with a One (1) year factory-backed warranty (parts, labor & software upgrades). Extended Warranties on all your purchases can be added at any time for an annual fee. Please contact our sales professionals.

DESIGN AND OPERATION TRAINING

We offer Design and Operation training, either in your facility or via our on-line web portal. Our expert trainers can teach your staff the most efficient way to create and deliver stunning content for your productions.

ABOUT US

Chyron is ushering in the next generation of storytelling in the digital age. Founded in 1966, the company pioneered broadcast titling and graphics systems. With a strong foundation built on over 50 years of innovation and efficiency, the name Chyron is synonymous with broadcast graphics. Chyron continues that legacy as a global leader focused on customer-centric broadcast solutions. Today, the company offers production professionals the industry's most comprehensive software portfolio for designing, sharing, and playing live graphics to air with ease. Chyron products are increasingly deployed to empower OTA & OTT workflows and deliver richer, more immersive experiences for audiences and sports fans in the arena, at home, or on the go.

CONTACT SALES

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